

The Applicant claims a method and apparatus for identifying the type of audio data stored in a packet to determine when to enable modification of jitter buffer latency. In a system for transmitting audio over a data network received audio packets are stored in a jitter buffer and read from the jitter buffer at a rate dependent on a jitter buffer latency. The jitter buffer latency can be modified during periods of quasi-silence. The apparatus determines if a data packet contains one of two types of audio, non-speech audio or speech audio. A non-speech detection module identifies the type of audio. An add header routine stores a non-speech identifier with the audio in the data packet. A remove header routine detects the state of the non-speech identifier to determine if non-speech audio is included in the data packet, whereupon the modification to the jitter buffer latency is enabled. The non-speech identifier may be a one bit field stored in the header of the data packet. The header may be the Real-time Transport Protocol header. The one bit field is set to a first of two states if the type of audio stored in the data packet's payload is non-speech audio and set to a second state if the type of audio stored in the data packet's payload is speech audio. (See Applicant's specification Fig. 2 and Page 5, line 16 - Page 6, line 6 as filed.)

Wildfeuer is directed to a packet voice transmitter that detects and alters transmission processing for in-band signals such as DTMF signals, in a digitized audio stream so that voice encoding is only performed on speech. Fixed transmission delay is avoided by detecting the possible presence of in-band signals before the entire in-band signal has been received. If a potential in-band signal is detected, voice frames are delayed and stored in a buffer. The delayed voice frames are forwarded if the in-band signal is a false alarm and discarded if an inband signal is present. (See Wildfeuer Abstract and Col. 2, lines 42-57.)

In contrast to the Applicant's claimed invention, Wildfeuer does not store "a non-speech identifier with the audio in the data packet" as claimed by the Applicant in independent Claim 1. Wildfeuer discusses identifying the type of data in non-packetized digitized audio stream to ensure that a DTMF signal is not processed as voice before it is packetized and transmitted by the transmitter. However, Wildfeuer does not store an identifier with the audio in the packet to identify the type of data stored in the transmitted packet. Wildfeuer merely stores the non-processed DTMF symbol included in the digitized audio stream or the processed voice in the

packet. Thus, Wildfeuer does not teach or suggest the Applicant's claimed "stores a non-speech identifier with the audio in the data packet". (Claim 1, line 7)

Wildfeuer does not teach or suggest enabling modification to the jitter buffer modification upon detecting from the state of the non-speech identifier that non-speech audio is included in the data packet as claimed by the Applicant in Claim 1 lines 8-11. Wildfeuer discusses including a jitter buffer in a receiver to compensate for packet transmission jitter. (See Col. 6, lines 23-31.) However, Wildfeuer does not teach or suggest how to determine when to enable modification of the jitter buffer latency. Wildfeuer does not even suggest modifying the jitter buffer latency. Wildfeuer merely discusses avoiding transmission delay in a transmitter. Thus, Wildfeuer does not teach or suggest the Applicant's claimed detection of "the state of the non-speech identifier to determine if non-speech audio is included in the data packet, whereupon the modification to the jitter buffer latency is enabled." as claimed by the Applicant in Claim 1 (lines 9-11).

The above quoted claim language is in base Claims 1, 7, 14, 19 and 20. Claims 2-6 are dependent on Claim 1, Claims 8-13 are dependent on Claim 7 and Claims 15-18 are dependent on Claim 14 and thus include this limitation over the prior art.

Thus, neither Wildfeuer nor any of the cited prior art teach or suggest the Applicant's claimed method for identifying the type of audio data stored in a packet to determine when to enable modification of jitter buffer latency. Accordingly, the present invention as now claimed is believed to be patentably non-obvious over the cited art. In view of the foregoing, removal of the rejections under 35 U.S.C. § 102(e) and acceptance of Claims 1-20 are respectively requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims (Claims 1-20) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 341-0036.

Respectfully submitted,

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